I claim as my invention:

1. An FM-CW altimeter detector suitable for detecting the presence of frequency modulated signals from an altimeter, said detector comprising:

means for capturing a high frequency FM-CW signal originating from a distant source;

means for delaying the captured signal;

means for mixing the captured signal with the delayed signal;

means for passing the difference signal and rejecting the sum signal from said mixer;

means for analyzing the frequency spectrum of the difference signal; and

means for processing the analyzed information from the frequency spectrum to determine if the signal originated from an altimeter device.

2. The detector of claim 1 wherein the delay means provides a delay which is sufficient to produce a difference frequency of less than 20 kilohertz.

3. The detector of claim 1 wherein the delay means provides a delay which is less than 1000 nanoseconds.

4. The detector of claim 1 wherein the delay means provides a time delay which is not more than one percent of the period of the difference signal.

5. The detector of claim 4 wherein the time delay is substantially longer than the period of the carrier frequency of the captured FM-CW signal.

6. The detector of claim 1 wherein the means for passing the difference signal and rejecting the sum signal comprises a low pass filter.

7. The detector of claim 6 wherein the cutoff frequency of the low pass filter is below 20 kilohertz.

8. The detector of claim 1 wherein the means for analyzing the frequency spectrum of the difference signal comprises a fast Fourier transform processor.

9. The detector of claim 1 wherein the means for processing the analyzed information reacts to the presence of signals from the analyzing means and the waveform type, slope, and period of said signals.

10. An FM-CW altimeter detector suitable for detecting the presence of frequency modulated signals from an altimeter, said detector comprising:

an antenna for receiving the frequency modulated signals from the altimeter;

an amplifier for increasing the amplitude of the received signals;

a delay circuit for delaying the amplified signals;

a mixer circuit to which the delayed and non-delayed amplified signals are applied;

a low pass filter which passes the difference signals from said mixer circuit;

an analog-to-digital converter which converts the analog difference signals to digital values;

means for filtering the converted digital signals and detecting information about the frequency content of the signals; and

processing means for comparing the detected frequency content information with stored information, said processing means indicating the reception of an altimeter signal when the detected information suitably corresponds to the stored information.

11. The detector of claim 10 wherein the delay circuit delays the amplified signals an amount of time

which is substantially longer than the period of the carrier frequency of the frequency modulated altimiter signal, which is shorter than one percent of the period of the difference signal, and which is less than an amount needed to provide a mixer difference signal of 40 kilohertz.

12. The detector of claim 10 wherein the filtering means comprises a fast Fourier transform processor.

13. The detector of claim 10 wherein the processing means reacts to information about the presence of signals and to the waveform type, slope, and period of the signals.

14. The detector of claim 13 wherein the processing means additionally compares the signal information to stored information for the purpose of identifying the type of airborne craft transporting the altimeter.